

Claim 1 has been rejected under 35 U.S.C. 112, second paragraph for a typographical error. An amendment to the claim to correct the typographical error has been made wherein the word flocculant has replaced -flocculate--.

Claims 1-3, 5, and 8-15 stand rejected under 35 U.S.C. 102(b) as being anticipated by Lewellyn, U.S. Patent No. 5,516,435 as the Examiner has stated that this reference discloses a method and agent for treating Bayer process liquors as claimed in the instant application.

Claims 4, 6, and 7 stand rejected under 35 U.S.C. 103(a) as unpatentable over Lewellyn, U.S. Patent No. 5,516,435.

Lewellyn broadly teaches a method for removing suspended solids from a process stream of the Bayer aluminum process. The method comprises providing an inverse emulsion comprising, in the discontinuous aqueous phase, a first hydroxamated polymer and a second polymer selected from the group consisting of alkyl metal (meth)acrylate homopolymers, aluminum (meth)acrylate homopolymers, and copolymers of said acrylates with (alk)acrylamides, wherein the inverse emulsion is subsequently inverted to form a solution of the hydroxamated polymer and second polymer; and contacting the solution with the Bayer process stream. The inverse emulsions contain an amount of these polymers effective to flocculate and settle the suspended solids. The molar ratio of the first hydroxamated polymer to the second polymer mer units are taught as critical: effective flocculation performance is only attained when certain ratios of the first and second polymer are used (See Column 2, line 33-42). The inventive inverse emulsion may, where desired, further comprise starch, flour, dextran, or an additional synthetic polymer flocculent although no disclosure teaches how to make or use such additional components in combination with the dual polymer emulsions. These inverse emulsions may be added at any stage of the process although the preferable teaching suggests adding the emulsion to the Bayer settler feed as is practiced with conventional anionic flocculents.

The rejection of claims 1-3, 5, and 8-15 of the instant application under 35 U.S.C. 102(b) as anticipated by Lewellyn, U.S. Patent No. 5,516,435 is respectfully traversed.

In contrast to Lewellyn, the instantly claimed method and agent for treating a Bayer process liquor containing red mud comprises contacting the Bayer process liquor with, in combination, an effective amount of a water soluble synthetic flocculent, dextran and starch prior to separating red mud from the liquor. The single water soluble synthetic flocculent agent useful in the instant invention is selected from the group consisting of homopolymers of acrylic acid, copolymers of acrylic acid and acrylamide, copolymers of acrylic acid and acrylamide modified to contain hydroxamic acid moiety and copolymers of acrylic acid and acrylamide modified to contain and acrylic acid moiety.

Applicants respectfully request the 35 U.S.C. 102(b) rejection be withdrawn as Lewellyn does not teach or suggest treatment agents comprising a combination of a single water soluble synthetic flocculent, dextran and starch, nor treating Bayer process liquor containing red mud with the same combination of three components: Lewellyn clearly requires at least two specific synthetic polymers, as described above, in specific ratios, and further requires that these polymers be incorporated in an emulsion prior to contacting the Bayer process stream. Lewellyn's invention is clearly materially different than the instant invention.

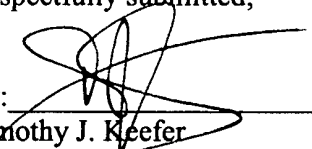
The rejection of claims 4, 6 and 7 under 35 U.S.C. 103(a) as being unpatentable under Lewellyn is respectfully traversed. Applicants respectfully suggest as described above, that their claimed invention is not taught or suggested in Lewellyn even in view of the suggested "knowledge of one of ordinary skill in the art". Claims 4, 6 and 7 of the instant invention clearly differ as Lewellyn nowhere discloses using Applicant's combination of additives nor their aqueous solutions being added to a Bayer process liquor containing red mud in the sequence and location of addition as Applicant's invention. Applicants respectfully suggest that it cannot be

obvious to one of ordinary skill in the art of liquid purification to modify a non-analogous method containing different materials to obtain Applicant's instant invention. Lewellyn so modified would no longer embody the essential aspects of his invention, e.g., at least two different, specific polymers added in inverse emulsions in specific ratios to the process. Applicants respectfully state that a showing of unexpected results is unnecessary as no prima facie case of obviousness has been presented either in the cited reference or its purported combination with so called knowledge of one of ordinary skill in the art.

In view of the above comments the instant claims are in condition for allowance. The cited reference alone or in combination with so-called knowledge of one of ordinary skill in the art neither anticipates or renders obvious the instantly claimed invention. An early Notice of Allowance is respectfully requested.

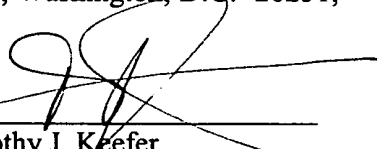
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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on MAY 16, 2002.


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